

VIRTUAL CAMERA SYSTEM FOR ENVIRONMENT CAPTURE

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ABSTRACT OF THE DISCLOSURE

A virtual camera system includes a primary camera and one or more virtual cameras for generating panoramic environment data. Each virtual camera is emulated by a pair of secondary cameras that are aligned such that the nodal point of each camera lens form a line with the nodal point of the primary camera. The primary camera is aligned in a first direction to capture a first region of an environment surrounding the virtual camera system, and each pair of secondary cameras is aligned in parallel directions to capture secondary regions. Environment data captured by each pair of secondary cameras is combined to emulate a virtual camera having a nodal point coincident with that of the primary camera. Environment data captured by the primary camera and attributed to each virtual camera is then stitched together to provide a panoramic environment map from the single point of reference.